

Caring for infants and families affected by neonatal abstinence syndrome

Standardized
care and compassion
are key to successful
treatment.

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LEARNING OBJECTIVES

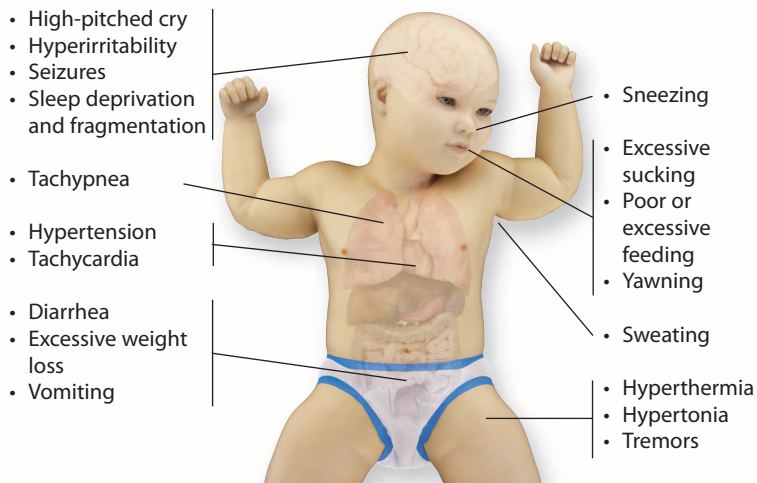
1. Identify manifestations of neonatal abstinence syndrome (NAS).
2. Describe the treatment of NAS.
3. Discuss how nurses can address challenges of NAS.

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NAS signs

Signs of neonatal abstinence syndrome (NAS) primarily occur in the neurologic, respiratory, and GI systems.



OPIOID USE DISORDER in the United States is a public health emergency not only for adults, but also for newborns. Infants exposed to opioids in utero and who exhibit withdrawal signs after birth are diagnosed with neonatal abstinence syndrome (NAS). According to Winkelman and colleagues, NAS incidence has quadrupled within the last decade; as of 2014, the incidence was approximately 14.4 cases per 1,000 births. More recent reports indicate that the incidence continues to rise, suggesting rates as high as 20 cases per 1,000 live births. Throughout the United States, at least one newborn is affected by NAS every 15 minutes.

The standard of care for newborns with NAS includes an environment that supports physiologic stability by offering comforting interventions such as holding, swaddling, and decreasing excessive stimulation. Infants who don't respond to this care may require pharmacologic treatment, most commonly with morphine or methadone. Pharmacologic intervention is associated with significantly longer lengths of stay, increased hospital stay costs, and the potential for mother and baby separation.

Clinical effects

Newborns are incapable of experiencing the psychological or relational components that define addiction in adults, so they shouldn't be described as addicted. Maternal use of various drugs (opioids, barbiturates, benzodiazepines, nicotine) individually or combined can lead to NAS; however, clinical NAS most commonly results from in utero opioid exposure. Anywhere from 55% to 94% of infants who are exposed to opioids in utero develop NAS.

NAS commonly affects the neurologic, respiratory, and GI systems. (See *NAS signs*.) Clinical signs vary for each infant and are based on several factors, including the type and amount of drug exposure, the time of last maternal drug use, and the drug's half-life.

For example, signs of NAS from in utero heroin exposure typically begin within 24 hours of birth, while signs of withdrawal from methadone usually begin between 24 to 72 hours after birth and in some cases may not manifest until 5 to 7 days after. The length and extent of withdrawal signs vary. An infant exposed to a drug with a shorter half-life (for example, hydrocodone, which has an average half-life of 4 hours) may be safely discharged

if no withdrawal signs occur by 3 days after birth. However, an infant exposed to a drug with a prolonged half-life (for example, methadone, which has a half-life of 19 to 41 hours) should be observed for at least 5 to 7 days. The lasting effect of drug exposure on signs of withdrawal is unknown. A study by Patrick and colleagues indicates that infants exposed to drugs with prolonged half-lives may have NAS signs for 4 to 6 months.

In addition to in utero drug exposure, genetics, sex, birth weight, gestational age, infant metabolism, maternal tobacco use, and exposure to other prenatal medications play a role in the development and severity of withdrawal.

Diagnosis

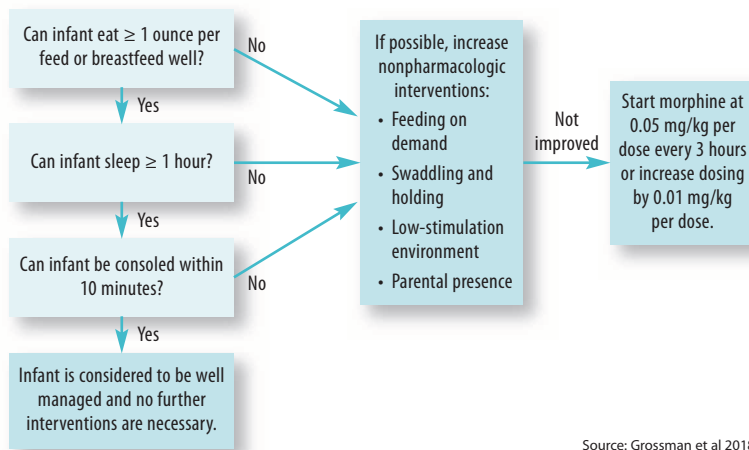
Diagnosing an infant with NAS requires an accurate history of the mother's drug use (including the last drug used and the time of consumption) and evidence of withdrawal. A scoring system can be used to aid diagnosis. Points are assigned based on the severity of each sign, and the total score helps determine the treatment plan. No strong evidence exists that one scoring tool is superior to another; however, research shows that a standard approach to diagnosis and treatment using a scoring tool improves outcomes and is recommended by the American Academy of Pediatrics.

Finnegan NAS scoring system

The Finnegan NAS scoring system, developed in 1975, is the seminal and most common tool used to guide pharmacologic NAS treatment.

Eat, Sleep, Console

With the Eat, Sleep, Console approach, nurses regularly assess an infant's ability to eat, sleep, and be consoled to determine when neonatal abstinence syndrome requires pharmacologic treatment.



Source: Grossman et al 2018

Nurses evaluate infants every 1 to 4 hours, based on their age, and score them on the presence and severity of common withdrawal signs, including central nervous system, metabolic vasomotor, respiratory, and GI disturbances. (Access the scoring system online at myamericannurse.com/?p=62938.) Pharmacologic treatment is recommended for any infant who receives a score ≥ 8 on three consecutive evaluations.

The Finnegan tool is long and complex, but a simplified short form recently was developed as a more efficient option. The short form allows for rapid assessment with limited items for scoring; however, although simpler to use, limited evidence exists to validate its use.

Other assessment tools to guide pharmacologic NAS treatment include the 11-item Lipsitz Neonatal Drug-Withdrawal Scoring System, the seven-item Neonatal Narcotic Withdrawal Index, the seven-item Neonatal Withdrawal Inventory, and the 19-item MOTHER NAS Scale. These tools haven't been as widely adopted as the Finnegan tool.

Eat, Sleep, Console scoring tool

The new Eat, Sleep, Console (ESC) NAS assessment scoring method uses regular assessments of the infant's ability to eat, sleep, and be consoled to determine the need for pharmacologic treatment. (See *Eat, Sleep, Console*.) Several studies of the ESC approach report decreased lengths of stay, less unnecessary exposure to pharmacologic treatments, and lowered care costs.

Treatment

The standard of care for infants with NAS, first described in the 1970s, includes holding, non-nutritive sucking, swaddling, pressure, rubbing, swaying, rocking, and reducing external stimulation. Infants with NAS who require hospitalization traditionally have been admitted to special care nurseries or the neonatal intensive care unit (NICU).

For babies who have persistent scores indicating withdrawal and who aren't responsive to initial interventions, a typical pharmacologic treatment plan includes opioid administration (usually oral morphine or methadone). Approximately 50% to 80% of infants exposed to opiates in utero receive pharmacologic management.

In response to the rise in NAS incidence, recognition of its complexity, and the impact of social factors, such as education, socioeconomic status, and living situation (social determinants of health), evaluation and treatment are being revisited. Newer evidence-based approaches strongly recommend a comprehensive and holistic approach that includes addressing the mother's psychosocial needs, evaluating the impact of social determinants of health, and taking advantage of community resources. (Visit myamericannurse.com/?p=62938 for additional resources.)

Challenges

Nurses encounter many challenges when considering appropriate evaluation, diagnosis, and treatment for infants with NAS.

Challenge 1: Rising incidence

Increased incidence of NAS has improved awareness and highlighted the number of healthcare resources required to care for these patients. Infants with NAS have complex physiologic and behavioral states that demand increased nursing care and unit resources. Nurses' primary responsibility is to provide care and support for the infant, but they also must support the mother, who in addition to a history of substance use disorder also may have complex psychosocial situations that complicate her care of a newborn. To meet the needs of each infant with NAS and support his or her mother, appropriate nurse staffing and adequate support and resources for families are essential.

Challenge 2: Care variation

Care of infants with NAS varies widely because no consensus exists on the best diagnostic or treatment strategy. Variations in care and using a subjective, rather than objective, scoring tool increase the potential for unnecessary exposure to pharmacologic treatment. Lack of standardization, inconsistent care plans, and pharmacologic treatment are associated with longer lengths of stay, unnecessary separation of the mother and infant, and poor long-term developmental outcomes. Evidence of improved outcomes supports local improvement efforts that focus on standardizing care. (See *Follow a standard*.)

Challenge 3: Care complexity

Many women with a substance use disorder also experience mental illness, trauma, economic hardship, intimate partner violence, unintended pregnancy, and housing instability. Each of these circumstances complicates efforts to decrease and eliminate substance use during pregnancy and after birth and may negatively impact the NAS treatment plan. Caring for an infant is challenging even for healthy mothers with stable support systems, but those with a substance use disorder may have strained relationships with family and friends, leading to a lack of support as well as no access to transportation to receive care. These women also face significant social stigma within the community and healthcare system.

Training and education for healthcare providers focused on the care of these women is limited, and perceptions are often negative. Such attitudes and unconscious (or conscious) bias reinforce stigma, contribute to inequitable treatment, disempower these mothers, and decrease trust in healthcare providers, all of which are associated with poor mother and infant outcomes.

An infant's recovery from NAS depends on positive attachment to a mother who can respond effectively to her infant's needs. A mother's ability to bond and respond appropriately is determined in large part by the type and quality of support she has. Healthcare teams must acknowledge existing biases and provide equitable and quality care that addresses and supports mothers' complex social needs.

Challenge 4: NICU environment

Most infants who require hospitalization for



Follow a standard

Evidence shows that standardized assessment and treatment of infants with neonatal abstinence syndrome (NAS) results in better patient outcomes, although no consensus exists as to the best protocol to use. Regardless of which protocol is chosen, nurses should establish and adhere to a consistent approach to evaluating and assessing these infants. All nurses who perform newborn assessments should complete education related to the protocol.

Vermont Oxford Network

The Vermont Oxford Network (public.vtoxford.org/neonatal-abstinence-syndrome-nas/) has established a multicenter quality collaborative focused on standardizing the care of infants with NAS. A toolkit available from the network focuses on developing and implementing:

- a standardized process for identifying, evaluating, treating, and discharging infants with NAS
- a standardized process for measuring and reporting NAS and drug exposure
- a culture of healing for the mother-infant dyad.

NAS are admitted to the NICU, which frequently is loud and chaotic and may exacerbate signs of the condition. The physical space also usually separates the mother-infant dyad. A calm, nurturing environment conducive to mother-child bonding is best for infants with NAS.

Evidence-based care models facilitate concurrent care for mothers and infants and support rooming-in and breastfeeding. In NICUs that can't support this model, other hospital units, including pediatric units, are used. Nurses on these units must be adequately educated to understand the needs of infants with NAS and mothers with a substance use disorder. Comprehensive, multidisciplinary supportive care, regardless of the hospital unit, requires resources such as breastfeeding support, social work, volunteer cuddler programs, and pharmacists.

Challenge 5: Social implications

To adequately address the social needs of infants with NAS and their mothers, nurses must collaborate with social workers, case managers, and community-based organizations. Syvertsen and colleagues propose a framework that considers NAS management a "cascade of care" that

3 key takeaways

Caring for infants with neonatal abstinence syndrome (NAS) and their mothers with a substance use disorder includes promoting mother-infant bonding, encouraging breastfeeding, and administering medication-assisted treatment as prescribed.

Bonding

Maternal-infant bonding has the greatest long-term effect on developmental and behavioral outcomes for infants with NAS. Nurses will have the biggest impact when care is thoughtful and intentionally focused on bonding and supporting maternal caregiving skills. The World Health Organization identified five principles for caring for mothers with a substance use disorder:

- prioritizing prevention
- ensuring access to prevention and treatment services
- respecting patient autonomy
- providing comprehensive care
- safeguarding against discrimination and stigmatization.

Breastfeeding

Breastfeeding has positive effects for both the mother (sobriety promotion, infant bonding, and enhanced self-esteem) and infant (reduced severity of NAS and decreased need for pharmacologic treatment). Several professional organizations (including the American College of Obstetricians and Gynecologists, American Academy of Pediatrics, and the Academy of Breastfeeding Medicine) recommend breastfeeding for mothers on opioid agonist therapy and have published guidelines supporting this practice. Nurses should be aware of their organization's policy regarding breastfeeding and maternal substance use. Evidence shows that support from healthcare providers is a strong predictor of whether mothers breastfeed.

Medication-assisted treatment

Although medication-assisted treatment (MAT) during pregnancy carries risks for the fetus, MAT with methadone or buprenorphine is the standard of care for mothers with a substance use disorder and is associated with better maternal and fetal outcomes.

begins with prevention, prenatal care, and drug treatment for the mother, extends throughout hospitalization from labor and delivery to the NICU, and continues after discharge as the mother and infant transition to their home and community. This approach requires a multidisciplinary team that includes physicians, nurses, social workers, occupational therapists, and case managers who provide care to the mother and infant during the hospital stay and connect them with resources after discharge.

Intervention from state child protective services may be appropriate for some infants with NAS to ensure they're safe and that their families have the necessary support to care for their new babies. Although some states still criminalize pregnant women with a substance use disorder, the American Academy of Nursing (and many other professional organizations) calls for an end to this practice and supports a public health response that provides care and support.

Nursing implications

Studies have identified the benefit of prenatal care screening and early intervention, but barriers to care may mean that NICU and other nurses are the first sustained contact that mothers of infants with NAS have with the healthcare system. Nurses have an opportunity to encourage and facilitate integrated, comprehensive, multidisciplinary care; establish trust; empathize with mothers to increase maternal-infant bonding; understand the context of substance use and effective treatment strategies; and encourage harm reduction. (See *3 key takeaways*.)

Achieving these outcomes requires education for nurses and self-reflection about substance use assumptions and biases.

Education

Nurse distress and frustration when caring for infants with NAS frequently is linked to lack of knowledge and understanding about mental illness and substance use, as well as the accompanying social complexities (poverty, homelessness, and trauma). Organizations should offer education that helps nurses build trusting partnerships with mothers with mothers affected by substance use disorder.

Self-assessment

Nurses can prepare to care for infants with

More information

Access these resources for more information about neonatal abstinence syndrome.

- Helping children born dependent on opioids. NOVA. November 5, 2018. [to.pbs.org/2Wl7oYr](https://www.pbs.org/2Wl7oYr)
- Public health approaches to addressing neonatal abstinence syndrome. Children's Safety Network. March 20, 2018. childrenssafetynetwork.org/webinar/public-health-approaches-addressing-neonatal-abstinence-syndrome
- Weiner J. To treat babies for drug withdrawal, help their mothers, too. Undark. December 12, 2018. bit.ly/2JBnBak
- Cohen J. A nurse's lesson: Babies in opioid withdrawal still need mom. Kaiser Health News. March 29, 2016. bit.ly/2uqlMRV
- Neonatal abstinence syndrome—PediaCast CME 042. Nationwide Children's Hospital. February 27, 2019. bit.ly/2FyLo6J
- Egan J. Children of the opioid epidemic. *The New York Times Magazine*. May 9, 2018. nyti.ms/2jl1G1n

NAS and their mothers by examining any implicit biases they may have about substance use that might affect their ability to develop rapport and establish trust. Substance use disorders frequently are linked to trauma, and nurses must provide care that acknowledges the trauma and safeguards against it.

Similar to the universal precautions approach, nurses should assume that all parents of NICU patients have a history of trauma and then seek to understand and address their psychosocial needs. This approach decreases the potential for bias and ensures more consistent care. It also allows for understanding when mothers of infants with NAS show signs of defensiveness, anger, and frustration, and why a mother might be absent, distant, or depressed. Viewing each mother's behavior through this lens creates an opportunity to gain understanding of her broader life circumstances and to address the barriers and challenges she faces to provide a stable and secure home environment. This understanding allows for the provision of equitable care and the ability to identify appropriate support and resources.

Foster respect and compassion

Providing standardized care for infants with NAS must be accompanied by equal care and support of the mother. Fostering a respectful and compassionate environment and establishing a nonjudgmental, trusting relationship with mothers will help them learn to interpret and manage signs of NAS in their infants.

Nursing assessment and critical thinking skills are instrumental to recognizing signs of infant withdrawal and facilitating diagnosis and treatment. Nurses should collaborate with hospital leadership, community partners, and elected representatives to advocate for policy change that supports and protects infants with NAS and their mothers and facilitates better access to care and resources related to substance use disorders. (See *Nursing best practices*.) **AN**

To view a list of references, visit myamericannurse.com/?p=62938

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Nursing best practices

When caring for infants with neonatal abstinence syndrome (NAS) and mothers with a substance use disorder:

- acknowledge that implicit bias is present within the healthcare system and aim to provide nonbiased care by examining preconceptions that may affect your ability to develop rapport and establish trust
- develop a respectful and empathetic nurse-patient relationship
- promote a calm, nurturing environment
- promote colleagues' understanding of substance use disorders and provide education on the importance of harm reduction (as opposed to insisting on abstinence) to facilitate treatment adherence and engagement
- provide maternal support by modeling appropriate infant care, encouraging maternal-infant bonding, and striving to avoid unnecessary mother-child separation
- offer assistance, guidance, and emotional and technical support to promote breastfeeding
- reduce barriers to care by advocating for multidisciplinary, collaborative care with social workers, mental health care providers, lactation experts, case managers, and community organizations
- collaborate at the organizational, community, and state levels to effect policy change and increase public awareness of NAS
- help establish and update standardized unit guidelines for NAS management.

Interventions for pregnant women and women of childbearing age with a substance use disorder

- Screen for substance use disorders when possible.
- Promote access to prevention, prenatal care, and treatment services.
- Educate patients about medication-assisted treatment as prescribed by the provider.

Interventions for infants with NAS

- Perform patient assessment and scoring.
- Implement nonpharmacologic comfort measures, including:
 - restful sleep
 - decreased external stimulation (provide dark, quiet room)
 - infant holding
 - nonnutritive sucking
 - swaddling, swaying, and rocking.
- Administer pharmacologic treatment as ordered by the provider.
- Provide treatment education to the infant's family.

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Please mark the correct answer online.**1. A clinical sign of neonatal abstinence syndrome (NAS) is**

- a. hyperirritability.
- b. bradycardia.
- c. hypothermia.
- d. hypotonia.

2. GI manifestations of NAS include

- a. constipation.
- b. diarrhea.
- c. weight gain.
- d. cramping.

3. Which of the following tools is most commonly used to guide pharmacologic treatment of NAS?

- a. Lipsitz Neonatal Drug-Withdrawal Scoring System
- b. MOTHER NAS Scale
- c. Finnegan neonatal abstinence scoring system
- d. Neonatal Narcotic Withdrawal Index

4. An infant with NAS is breastfeeding well but can't sleep more than 30 minutes at a time. Nonpharmacologic interventions haven't improved sleep time. According to the Eat, Sleep, Console algorithm, an appropriate action would be to

- a. provide a high-stimulation environment.
- b. start morphine at 0.75 mg/kg per dose every 2 hours.
- c. start morphine at 0.05 mg/kg per dose every 3 hours.
- d. continue to observe for improvement.

5. All of the following are challenges of caring for infants with NAS except

- a. social implications.
- b. care complexity.
- c. care variation.
- d. decreasing incidence.

6. Which statement about breastfeeding infants with NAS is correct?

- a. Breastfeeding isn't recommended for infants with NAS.
- b. Breastfeeding is recommended for mothers taking opioid agonists.
- c. Infants benefit from breastfeeding, but mothers don't.
- d. Provider support doesn't affect whether a mother breastfeeds.

7. The resource that offers information, expert consultation, training, and technical assistance to child welfare, dependency court, and substance abuse treatment professionals to improve the safety, permanency, well-being, and recovery outcomes for children, parents, and families is

- a. Maternal Opiate Medical Supports.
- b. the National Center on Substance Abuse and Child Welfare.
- c. the Cuddler Program.
- d. Hushabye Nursery.

8. Nonpharmacologic interventions for infants with NAS include

- a. avoiding swaddling the infant.
- b. avoiding holding the infant.
- c. providing a bright room.
- d. providing a dark room.

9. Which of the following statements related to nursing best practices for caring for pregnant women and mothers with a substance use disorder is correct?

- a. Nurses should understand that substance use disorders are rarely linked to trauma.
- b. Nurses should assume that all parents of neonatal intensive care unit infants have a history of trauma.
- c. Nurses should encourage separation of mother and infant to promote optimal care of the infant.
- d. Nurses should screen a pregnant woman for a substance use disorder only if they see signs of misuse.

10. Which of the following statements about medication-assisted treatment (MAT) is correct?

- a. MAT is the standard of care for mothers with a substance use disorder.
- b. MAT does not carry risk for the fetus.
- c. Only methadone is acceptable as MAT.
- d. Only buprenorphine is acceptable as MAT.

Modified Finnegan NAS system

The Finnegan neonatal abstinence scoring (NAS) system is the most common tool used to guide NAS treatment.

Finnegan NAS system											
System	Signs	Score	DATE/ TIME	DATE/ TIME	DATE/ TIME	DATE/ TIME	DATE/ TIME	DATE/ TIME	DATE/ TIME	DATE/ TIME	DATE/ TIME
CENTRAL NERVOUS SYSTEM DISTURBANCES	Continuous high-pitched (or other) cry > 5 minutes or inconsolable	3									
	Continuous high-pitched (or other) cry <5 minutes or difficult to console	2									
	Sleeps <1 hour after feeding	3									
	Sleeps <2 hours after feeding	2									
	Sleeps <3 hours after feeding	1									
	Hyperactive Moro reflex	2									
	Markedly hyperactive Moro reflex	3									
	Mild tremors disturbed	1									
	Moderate-severe tremors disturbed	2									
	Mild tremors undisturbed	3									
	Moderate-severe tremors undisturbed	4									
	Increased muscle tone	2									
	Excoriation (specific area)	1									
	Myoclonic jerks	3									
	Generalized convulsions	5									
METABOLIC/ VASOMOTOR/RESPIRATORY DISTURBANCES	Sweating	1									
	Fever 100.4°-101°F	1									
	Fever > 101°F	2									
	Frequent yawning (> three to four times/interval)	1									
	Mottling	1									
	Nasal stuffiness	1									
	Sneezing (>three to four times/interval)	1									
	Nasal flaring	2									
	Respiratory rate > 60/min	1									
	Respiratory rate > 60/min with retractions	2									
GASTROINTESTINAL DISTURBANCES	Excessive sucking	1									
	Poor feeding	2									
	Regurgitation	2									
	Projectile vomiting	3									
	Loose stools	2									
	Watery stools	3									
	TOTAL SCORE										

Source: Hudak and Tan 2012

Resources

The following organizations, partnerships, and collaboratives represent some of the work being accomplished to address the challenges of reducing the incidence of neonatal abstinence syndrome (NAS) and providing the best care for infants and families.

The Cuddler Program

This program provides physical comfort to babies with NAS at the University of Pittsburgh Medical Center. Volunteers hold and rock babies who are having withdrawal after being born to mothers who used heroin or other opioids during pregnancy. upmc.com/locations/hospitals/magee/about-us/volunteer-magee/opportunities

Hushabye Nursery

This nonprofit organization cares for infants with NAS and their mothers outside of the hospital setting. The staff observe infants for NAS signs and provide nonpharmacologic and pharmacologic care. hushabyenursery.org

Illuminate Colorado

This network includes four established organizations: Colorado Alliance for Drug Endangered Children, Prevent Child Abuse Colorado, Colorado Chapter for Fetal Alcohol Spectrum Disorders, and Sexual Abuse Forever Ending. It connects families with key resources and builds strong, supportive communities. illuminatecolorado.org/sen

Maine Department of Health and Human Services Snuggle ME Project

This project offers evidence-based information and tools for providers in the care and screening of pregnant women and newborns. maine.gov/dhhs/SnuggleME

Maternal Opiate Medical Supports

The goal of the Maternal Opiate Medical Supports collaborative is to improve maternal and fetal health outcomes, increase family stability, and reduce costs of NAS to Ohio's Medicaid program by providing treatment to pregnant mothers with opioid use disorder during and after pregnancy via a maternity care home model. momsohio.org

National Center on Substance Abuse and Child Welfare

This national resource center offers information, expert consultation, training, and technical assistance to child welfare, dependency court, and substance abuse treatment professionals to improve the safety, permanency, well-being, and recovery outcomes for children, parents, and families. ncsacw.samhsa.gov/default.aspx

The NEST program: NAS baby care

This program is committed to helping families affected by substance use disorder recover in an open and nonshaming environment where respect, honesty, and diversity are highly valued. alaskaregional.com/service/the-nest-program

Newborn Withdrawal Project

This Wisconsin-based project was developed to assist practitioners and families faced with newborn withdrawal. wic.waisman.wisc.edu/newborn-withdrawal-project

Ohio Perinatal Quality Collaborative

This statewide consortium of perinatal clinicians, hospitals, policymakers, and government entities aims to reduce preterm births and to improve birth outcomes across Ohio. opqc.net

Oklahoma Perinatal Quality Improvement Collaborative

Opioid use disorder/neonatal abstinence syndrome work-group meetings are open to anyone. Topics include the care of prenatal, in-hospital, and postnatal infants in withdrawal. opqc.org

Oregon Pregnancy and Opioids Workgroup

This organization offers online recommendations and resources for providers caring for infants with NAS. oregon.gov/oha/PH/PREVENTIONWELLNESS/SUBSTANCEUSE/OPIOIDS/Documents/Oregon-Pregnancy-and-Opioids-Recommendations.pdf

Parent-Child Assistance Program

This evidence-based home visitation case management model in Washington State is available to pregnant women with a substance use disorder. depts.washington.edu/pcapuw

Sober Moms, Healthy Babies

This initiative's mission is to reduce the impact of substance use in Nevada by partnering with state treatment centers that work with pregnant women struggling with addiction. sobermomshealthybabies.org

Vermont Oxford Network

This network offers a quality improvement implementation package for statewide improvement of care for infants with NAS and their families. public.vtxford.org/neonatal-abstinence-syndrome-nas

Washington State Fetal Alcohol Spectrum Disorders

Several agencies and programs throughout Washington State promote strategies that support healthy lifestyles for a broad audience, including individuals and families affected by alcohol use disorder and fetal alcohol spectrum disorders. depts.washington.edu/fasdwa/womenchild.htm

West Virginia Perinatal Partnership

This partnership focuses on improving health outcomes for pregnant women and their babies in West Virginia. wvperinatal.org